

**Amendment and Response under 37 CFR 1.116**

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Applicant(s): SMITH et al.

Group Art Unit: 1646

Serial No.: 09/813,345

Filed: 20 March 2001

For: METHODS FOR INHIBITING CGRP BINDING (as previously amended)

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**Amendments to the Claims**

This listing of claims replaces all prior versions, and listings, of claims in the above-identified application:

1-20. **canceled**

21. **(previously presented)** The method of Claim 29 wherein the CGRP receptor is on a cell.

22. **(previously presented)** The method of Claim 29 wherein the CGRP receptor is cell free.

23. **(original)** The method of Claim 21 wherein the cell is in culture.

24. **(original)** The method of Claim 21 wherein the cell is part of a tissue.

25. **(original)** The method of Claim 21 wherein the cell is in an animal.

26. **(original)** The method of Claim 25 wherein the animal is a human.

27-28. **canceled**

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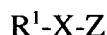
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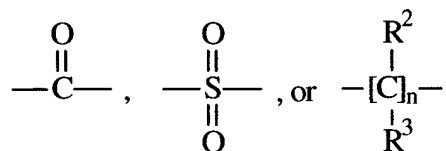
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29. **(previously presented)** A method for inhibiting CGRP binding to one or more CGRP receptors comprising contacting a CGRP receptor with a composition comprising a peptide having the general formula:



wherein Z is a CGRP receptor-binding peptide,  $R^1$  is an organic group, X is



and wherein  $R^2$  and  $R^3$  are independently H or an organic group and n is a whole integer between 1 and 10;

in an amount effective to inhibit CGRP binding to one or more CGRP receptors.

30. **(original)** The method of Claim 29 wherein Z is a peptide fragment of at least 15 amino acids from CGRP.
31. **(original)** The method of Claim 30 wherein Z comprises the amino acid sequence of SEQ ID NO:1 or SEQ ID NO:2.
32. **(previously presented)** The method of Claim 29 wherein Z is an antagonist of human CGRP.
33. **(previously presented)** The method of Claim 29 wherein Z is an antagonist of  $\alpha$ -CGRP or  $\beta$ -CGRP.

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34. **(currently amended)** The method of Claim 33 wherein Z comprises ~~the~~ an amino acid sequence selected from the group consisting of SEQ ID NOS:6-17 and 23.
35. **(currently amended)** The method of Claim 33 wherein Z comprises ~~the~~ an amino acid sequence selected from the group consisting of SEQ ID NOS:18-22.
36. **(original)** The method of claim 29 wherein Z is a CGRP antagonist peptide fragment selected from the group consisting of amylin, CGRP and adrenomedullin.
37. **(original)** The method of Claim 29 wherein R<sup>1</sup> is an aromatic group, a heterocyclic group or an alkyl group and R<sup>2</sup> and R<sup>3</sup> are independently H, an aromatic group or an alkyl group.
38. **(original)** The method of Claim 37 wherein R<sup>1</sup> is a C1-C4 alkyl group.
39. **(original)** The method of Claim 38 wherein R<sup>1</sup> is a fluoroalkyl.
40. **(original)** The method of Claim 38 wherein R<sup>2</sup> and R<sup>3</sup> are independently H, a C1-C4 alkyl group or a phenyl moiety.
41. **(original)** The method of Claim 38 wherein R<sup>1</sup> is a C5-C10 aromatic group, a C5-C9 heterocyclic group or a C1-C4 alkyl group.
42. **(original)** The method of Claim 41 wherein R<sup>2</sup> and R<sup>3</sup> are independently H or a C5-C10 aromatic group or a C1-C4 alkyl group.
43. **(original)** The method of Claim 37 wherein R<sup>1</sup> has the general formula:

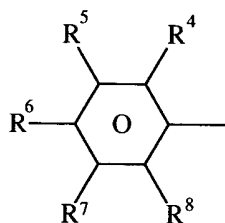
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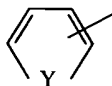
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and wherein  $R^4$ - $R^8$  are each independently selected from the group of H, fluoro, chloro, bromo, iodo, nitro, nitrile (cyano), amino, N-methyl amino, N,N-dimethyl amino, hydroxy, methoxy, thiomethoxy (S-methyl), methyl, ethyl, n-propyl, iso-propyl, n-butyl, iso-butyl, sec-butyl, tert-butyl, trifluoromethyl, trifluoromethoxy, vinyl, acetamido, phenyl, tolyl, and methoxyphenyl.

44. **(original)** The method of Claim 43 wherein  $R^6$  is trifluoromethyl and  $R^4$ ,  $R^5$ ,  $R^7$  and  $R^8$  are F.
45. **(previously presented)** The method of Claim 37 wherein  $R^1$  is



and wherein Y is selected from the group consisting of O, NH, and S.

46. **(previously presented)** The method of Claim 43 wherein the peptide is a CGRP antagonist having at least 15 consecutive amino acids selected from a protein from the group consisting of N- $\alpha$ -benzoyl- $\alpha$ -CGRP, N- $\alpha$ -benzyl- $\beta$ -CGRP, N- $\alpha$ -benzoyl- $\beta$ -CGRP and N- $\alpha$ -benzyl- $\alpha$  CGRP, dibenzyl-h- $\alpha$ -CGRP and dibenzyl-h- $\beta$ -CGRP.

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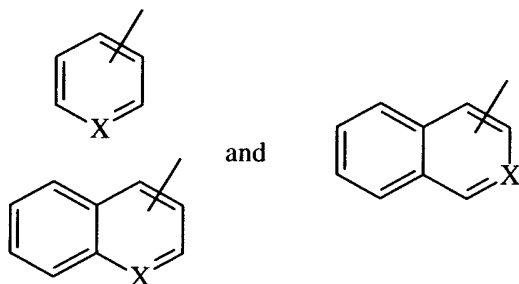
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47. **(original)** The method of Claim 37 wherein  $R^1$  is selected from the group consisting of:



and wherein  $X$  is selected from the group consisting of C and N.

48-53. **canceled**

54. **(previously presented)** The method of claim 29 wherein  $Z$  is a vasoactive peptide.
55. **(previously presented)** The method of claim 54 wherein  $Z$  is an antagonist of human CGRP.